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Seminormalization and regulous functions on complex affine algebraic varieties

Abstract: Let X be an affine complex algebraic variety. The "seminormalization of X" is an algebraic variety X^+ obtained by gluing together the points in the fibers of the normalization morphism. Its construction was inspired by the notion of "weakly normal analytic spaces". One of the interest of the seminormalization comes from the fact that it has nice singularities in codimension 1 while being linked to X by a finite and birational homeomorphism. The main result of this talk is that one can identify the polynomial functions on $X^+(C)$ with the rational functions of X which are continuous for the euclidean topology on all X(C). Those functions can be seen as complex regulous functions or also as algebraic c-holomorphic functions. We will give some characterizations of this type of functions and some explicit constructions of seminormalizations.